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ABSTRACT

In order to assess the effect of college experiences on student values and retention, a study was conducted of 848 beginning students at three private and four public two-year institutions in the Chicago area. At the beginning of the academic year, two tests were given: (1) the Activities Index to assess the personality characteristics of the students, and (2) the Allport-Vernon-Lindzey Value Inventory to determine the values of the students. At the end of the academic year, two tests again were administered: (1) the College Characteristics Index to assess the college environment as perceived by the students, and (2) the Allport-Vernon-Lindzey Value Inventory as a posttest to ascertain any change in values over the year. Rather than assuming that personality characteristics or college climate alone was the more important correlate of value change, it was postulated that the dynamic interaction of the two was the determining factor. In fact, however, no significant change in values was found to have occurred at any of the seven schools. On an aggregate basis, dropouts were found to be significantly lower on intellectual orientation than either stayers or transfers. Scholastic aptitude was found to have no significant effect on withdrawal at six of the seven schools. Data are presented according to institution, and are organized into tables. (NHM)

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THE UNIVERSITY OF CHICAGO

THE IMPACT OF THE JUNIOR COLLEGE ENVIRONMENT ON STUDENT VALUES AND RETENTION

ABSTRACT
OF

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE DIVISION OF THE SOCIAL SCIENCES
IN CANDIDATE FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATION
BY
ERNEST B. JASKI

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DISSERTATION ABSTRACT

I. TITLE: The Impact of the College Environment on Student Values and Student Retention

II. NAME AND SPECIAL FIELD: Ernest B. Jaski, Educational Administration

III. ADVISORY COMMITTEE: Robert M. Rippey, Chairman
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IV. PURPOSES OF THE STUDY:

Change is the essence of education. While it may seem self-evident that changes in students do occur, it is always possible that educators may be deluding themselves as to the nature, extent, and direction of changes which result from their programs. Among the outcomes sought by colleges are satisfaction with academic life and changes in attitudes and values.

There were two major purposes of this study: 1) to assess the effect of college experiences upon student values and retention and 2) to explain any changes in values due to exposure to college life. A prime objective was to explore the relationship of the interaction of personality, represented as need-dispositions, with college environment, characterized as institutional press or expectations, to the maintenance and change of these basic value-orientations and to retention among two-year college students. Specifically, the following questions were investigated:

1) Does college exposure have any significant impact upon students' basic values during or after one year?

2) Are there students with peculiar personality characteristics or needs who appear predisposed to change? Under what conditions

3) What relationships exist between value orientations, personal need-dispositions, environmental press and retention?

V. THE SIGNIFICANCE OF THE STUDY

Much of the previous related research has been methodologically

weak in some major aspect, essentially descriptive in nature, and devoid of control of key variables. Instead of merely describing any changes within a highly homogeneous sample as most other studies have done, this investigation attempted to provide a theoretical explanation of any change and a replication of the study within the context of a diversity of junior college climates. In addition, a comparison was made between private and public junior college as to the nature and extent of any value changes and the sources of variance.

In practice, the crucial, strategic role of the nonintellective, environmental factors in affecting college experience and in discharging the administrative responsibilities must be recognized and better understood. A college must be aware of the multiplicity of factors that may moderate and invalidate its plans and procedures for student development. The identification and confirmation of the nonintellective aspects of college life influential upon the student's total academic growth can help school boards and chief administrators better attain educational goals. Any endeavor undertaken with the objective of ascertaining the impact of the educational experiences upon the learner can be construed as potentially significant; when that undertaking also attempts to identify the underlying process affecting that change, it can be singularly relevant.

BACKGROUND OF THE STUDY

The retention of students, whether a student stays in or leaves school, continues to be of concern to educators and recently the government at all three levels, particularly the Federal. With more and more people prodded, desirous, and capable of continuing their education beyond high school, the importance of this problem persists especially when the rational allocation of limited resources, human and capital,

becomes increasingly acute. Furthermore, we are aware that the dropout problem, especially at the college level, is complex and multifaceted. Whether certain idiosyncratic qualities of the student or the impact of the college environment exerts the most influence remains to be further examined and hopefully at least partially resolved.

Mere retention, however, or satisfactory performance in grades are neither sufficient nor valid criteria of success for the student or for the college. The increasing complexity of modern American society has resulted in new demands upon the attitudes and values of students. Many colleges also hope to instill and to modify values, the so-called residual effects.

Unfortunately, to change or implant student values according to the predetermined objectives of the college has been found to be an extremely difficult task. Although there appears to be a growing consensus among researchers in their study of the affective outcomes of higher education that after exposure to college life students do become, for example, more tolerant of other people's views, less ethnocentric, less authoritarian, controversy still prevails on whether they significantly change in their basic value- orientations. The classic Bennington study by Newcomb, for example, indicated that socially aspiring female students change in political conservatism[1] but Jacob reports from his extensive review of surveys that in the vast majority of colleges no significant change in values occurs.[2] Most students were described as unabashedly self-centered, interested primarily in material gratifications. Telford and Plant, however, after first attributing change to college attendance,

[1] Theodore M. Newcomb, Personality and Social Change (New York City, N.Y.; (Dryden Publishing, 1943).

[2] Philip E. Jacob, Changing Values in College: An Exploratory Study of the Impact of College Teaching (New York: Harper Publishing Company, 1957).

later concluded that the broader society and not college influences values over time regardless of any college experience.[3] Whether college does exert a significant influence upon student values remains a perplexing problem and continues to provoke a lively controversy among educators.

VII. THE PROBLEM

Certain variables were suggested as influences upon student value change in college and retention. Among the major variables known to influence individual behavior are the following:

1. Social, personality, and demographic factors which have influenced students prior to their entrance into college
2. Contingent factors which characterize the college climate and prevailing peer-group relations.
3. Institutional or organizational characteristics.

Obviously all of the above are interrelated. Although the three dimensions may be of equal importance, primary emphasis was given to the first two in their impact on student behavior.* Basically, if there are college environmental influences, which students stay or leave and which students undergo change and in what values?

A schematic diagram which illustrates the interdependent influence of personality needs and college environment upon final student values and retention and from which the formal hypotheses were drawn follows:

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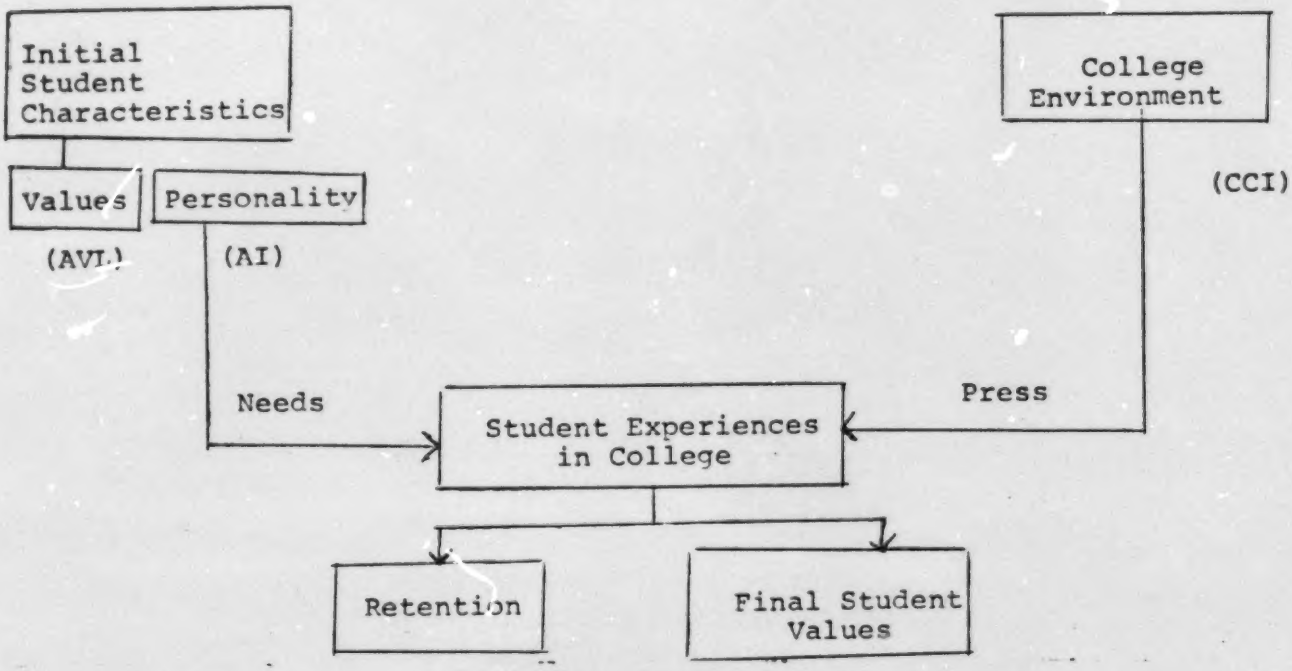
[3] Charles W. Telford and Walter T. Plant, Personality Changes Associated With a College Education (San Jose State College, 1962).

* Since each school, however, was treated separately, an attempt at grouping the schools by structural characteristics to permit at least visual inspection of the data from this standpoint was made. Possibly patterns of value-orientation may be discernible by type of school.

(INCIPIENT) INDEPENDENT VARIABLES (INTERVENING)



DEPENDENT VARIABLES

As Figure 1 indicates, either certain initial personality characteristics of the students or incoming values may be strongly related to both changes in values in the course of the academic year and to the susceptibility to dropping or transferring from a college. The personality needs were those identified by Murray[1] and incorporated into an index called the Activities Index (AI)[1] while values were measured by the Allport-Vernon-Lindzey Inventory.[2] In short, certain individuals are predisposed to being favorably affected by attending college. A necessary intervening agent, however, which can facilitate or actually impede that change is the press of the college or the rules, regulations, practices, norms of peer groups, faculty, and

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[1] Henry murray, Explorations in Personality (New York: Oxford University Press, 1942)

[1] George Stern, Maurice Stein, and Benjamin S. Bloom, Methods in Personality Assessment: Human Behavior in Complex Social Situations (Glencoe: The Free Press, 1957.)

[2] Gordon W. Allport, Philip E. Vernon, and Gardner Lindzey, Study of Values, rev. ed.; (New York: Houghton Mifflin; 1960).

administration with which the student inevitably interacts. The press was identified by the College Characteristics Index (CCI).[3] Rather than merely assuming that personality characteristics or college climate per se were important correlates of value change, it was postulated that the dynamic interaction of the two, or a variable called need-press, was the more determinate. Briefly, the degree of discrepancy between the student needs and the college press, or incongruity, will also be integrally related to what attitude change may develop within an institution. Operationally, the differences between the 30 scales of the Activity Index and their psychological counterparts of the College Characteristics Index represent this need-press.

VIII. DEFINITION OF VARIABLES AND EXPECTATIONS

The Dependent Variables

Retention

1) Staying was indicated by those students who completed their freshman or sophomore year.

2) Transferring included those students who voluntarily transferred within the academic year.

3) Dropping out included those students who voluntarily or involuntarily left the school and did not transfer within the academic year.

Values

The values measured were those identified by the Allport-Vernon-Lindzey Value inventory. They include theoretical, economic, aesthetic, political, social, and religious values.

The Independent Variables

The seven independent variables were intellectual orientation, ego-defensiveness, conformity to group norms, three types of need-press incongruity, and scholastic aptitude. Each is further described.

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[3] C. Robert Pace and George G. Storn, Criterion Study of College Environments (Syracuse University Research Institute, Psychological Research Center, 1958).

1) Intellectual orientation
This need-disposition included five factors determined by Stern from the Activity Index. This dimension consists of intellectual interest. (e.g., interest in science), self-assertion (e.g., dominance), audacity (e.g., risk-taking), fantasied achievement, motivation, and applied interests.

2) Ego-defensiveness
Scores on this dimension measure such components as factorized by Stern as constraint, diffidence, orderliness, submissiveness, timidity, and closeness. A high, score suggests a generally high level of self-abasement, dependent, submissive, socially controlled behavior.

3) Conformity
This dimension suggests a strong desire for social approval, a tendency to agree with group or authoritative judgment, concern with group norms, submissiveness. Included in this orientation are such need scales as adaptability, abasement, nurturance, deference.

4) Incongruity Type A
This incongruity represented the differences between the student's views of his college and those of the general student body; it was called distorted perception.

5) Incongruity Type B
This incongruity consisted of the differences between a student's needs and the norms of the college press. This difference between a student's needs and the expectations of the college was also called normative consensus.

6) Incongruity Type C
The individual needs were compared with the individual's perception of the college press, a difference also called alpha-beta press.

7) Scholastic aptitude
This cognitive variable, designated as SAS, scholastic aptitude score, was identified by ACT or SAT scores available for most students from these schools.

Expectations

The substance of the hypotheses posed the following:

1) Stayers would differ from dropouts and transfers within each school, particularly on intellectual orientation; 2) those students characterized as intellectually oriented would be most susceptible to value change; those students described as highly ego-defensive would undergo the least change; 3) conformity would also be highly related to value change; 4) the most change would occur among the intellectually oriented under some intermediate degree of need-press incongruity.

Scholastic aptitude, suspected as a variable influencing retention and value change, was adopted as a control variable.

IX. THEORETICAL BACKGROUND

Basically, several major theories exist, each with its own active proponents, for explaning the process of learning, motivation, and very recently, attitude change. They are 1) simple reinforcement or S-R, 2) consistency (dissonance reduction), and within the past few years 3) need for variety (need for exploration, activation). Here it was felt that all three theories have relevance but can and should be reconciled. The reconciliation was attempted through the concepts borrowed from Maslow and Bruner.

The reinforcement and consistency theories are based largely on a one-sided homeostatic principle. They all emphasize the need to order experience. The principles of consistency or the rational man approach to explaining behavior include such concepts as balance, congruity, and dissonance, differing in the degree of specificity. Specifically they predict that violations of psychological expectancies will create unpleasant dissonance.

The variety theories, however, indicate that perfectly predictable and consonant perceptual/cognitive inputs are boring and unpleasant. These theories emphasize the need to experience disorder. Specifically they predict that violation of psychological expectancies may actually be sought after in mild amounts. An optimal degree of incongruity contains its own rewards for the individual.

According to consistency theory, it is assumed that the entering college student will tend to adopt the values of the prevailing group or subgroup. From one viewpoint this assimilation or accommodation can be functionally integrative, at least for social relations. Nevertheless, these values may be antithetical to those which are espoused by the faculty and college administration. If, however, great discrepancy or incongruity exists between his needs and the group's expectation or norms, either of the peer group or the college

faculty, then it is further assumed that he will leave the organization. According to the adaptation model postulated by the variety theorists, individuals seek stimulation but up to a point. Overstimulation of the individual, in this instance, academically, should elicit avoidance through outright withdrawal from the situation, alienation or isolation, In any case, the ultimate effect would be one of student insulation toward any attempts at value indoctrination or change by the school. The conclusion is that there is this intermediate, optimum level of arousal in achieving change.

According to Maslow, however, there is a natural priority or hierarchy of needs leading to social motives which the individual seeks to fulfill. It is posited that needs give rise to values. Unless such more potent needs as safety, belongingness-love, and self-esteem (a sense of personal adequacy), ranked in terms of their relative urgency are satisfied, the striving for self-actualization will remain dormant. The need and especially the appreciation for understanding and knowledge, exemplifying self-actualization, comes into full play only when more basic motives have been satisfied. Since Bruner, moreover, claims that to a considerable degree our perceptions and needs are colored by the level of perceptual readiness of the individual, the scholastic aptitude of the student has to be considered as a possible concomitant variable affecting value change. Hebb and McClelland provide support to the above theorizing by observing that only under conditions of optimal stimulation or incongruity and with those individuals whose basic social needs are fairly met will attitude change occur.

The greater the incongruity between institutional press and student needs, the greater the arousal. Higher levels of arousal would increase the probability of a student leaving the institution. Furthermore, highly stressful, emotional states are hindrances to attitude or value change. The environment can

serve as a force facilitating value change but particularly on those individuals who are predisposed emotionally or highly susceptible to this influence. Those students characterized in this study as intellectually oriented were considered to be malleable to change. Those students typified as ego defensive were assumed to be relatively impervious to any attempts at attitude change. It was further claimed that not only would the intellectually oriented student be predisposed to change but also that an intermediate degree of incongruity in his need-press was the optimal point of change in his values.

X. PLAN AND PROCEDURES OF STUDY

This study was conducted with the cooperation of seven two year colleges. Each school was treated separately to provide the intended replication of findings of the effects of exposure of similar personality types under diversified environmental conditions.

Selection of sample

The colleges, three private and four public, were located in the Greater Metropolitan Chicago Area and were selected on the basis of a diversity of student bodies in personality and academic aptitude. Included in the sample were urban and suburban, private and public, small and large, residential and commuter schools.

Instrumentation

The Activities Index was selected to assess the personality-needs of the students. Based on the needs derived from Murray's analysis of personality, it represents a comprehensive probe of an individual's varied behavioral predisposition. These needs are reflected in 300 statements of activities which the students report as liking or disliking.

The College Characteristics Index also represents one of the more outstanding instruments in measuring the college environment. It also consists

of 300 statements distributed among 30 scales of 10 items each which measure the environmental counterparts to the personality needs. For example, a student's need for order is matched with the environmental press on order.

For the identification of values, the Allport-Vernon-Lindzey test was used. The test is a forced-choice, ipsative instrument with each item weighted according to a student's preference.

Administration of questionnaires

At the beginning of the academic year two tests were given: 1) the Activities Index to assess the personality needs of the students and 2) the Allport-Vernon-Lindzey Value Inventory as a protest to determine the values of the students at that time. At the end of that academic year two tests again were administered: 1) the College Characteristics Index to assess the college environment as perceived by the students, a perception referred to as institutional expectation or press and 2) the Allport-Vernon-Lindzey Inventory as a post-test to ascertain any change in values over the year. A follow-through by mail and telephone also were undertaken to secure the reponses from those students who because of withdrawal from school or absence from the scheduled testing sessions did not complete the questionnaires with the initially planned groups. Anonymity and confidentiality of responses were emphasized.

Statistical Analysis

The Allport-Vernon-Lindzey tests were hand-scored while the Activity Index and College Characteristics Index forms were machine-scored by the National Computer System in Minneapolis.

For the testing of the hypotheses on retention,frequency distributions, histograms, and t-tests were obtained through the use of a computer program for plotting furnished by the Biomedical library and the Harvard Data-Text

computer program for the distributions and tests of significance.

For the testing of the hypotheses on value change, MESA 85, MESA 95, and MESA 97 computer programs were utilized to provide the multiple regressions, correlations. and multivariate analysis of variance, respectively.

XI. THE FINDINGS AND DISCUSSION

Hypothesis one stated that 1) students who stayed would differ on intellectual orientation from those who dropped out or transferred and 2) those who deviated most from the central tendency in a group on intellectual orientation would be particularly prone to leaving the school. Other variables were also considered.

It can be observed from Table 1 that on an aggregate basis, dropouts were significantly lower on intellectual orientation than the stayers. Although the stayers themselves did not score high on this dimension, the dropouts in comparison were considerably lower, a difference sharply differentiating these two groups. As table 1

Tabel 1. TESTS OF SIGNIFICANCE OF MEAN DIFFERENCES ON INTELLECTUAL ORIENTATION AMONG STAYERS, DROPOUTS, AND TRANSFERS-TOTAL SEVEN COLLEGES

Group	Group	Difference	Standard Error	Significance	
Stayers	Dropouts				
-1.10	-3.74	2.64	1.16	.02*	d.f. 750
Stayers	Transfers				
-1.10	.57	- 1.67	1.54	.27	d.f.699
Transfers	Dropouts				
.57	-3.74	- 4.31	1.82	.01*	d.f. 147

*Significant beyond the .05 level

Total No. of Units 848

further indicates, no significant difference existed between the stayers and transfers on intellectual orientation although the transfers were appreciably higher. Finally, a most pronounced difference on intellectual orientation distinguished the transfers from the dropouts, a difference significant at the .01 level of probability. All tests of significance were based on between group differences and not those from the national norm on intellectual orientation established by the test's authors.

The differences on intellectual orientation among the three groups within and among the colleges and their impact on retention varied notably. Generally speaking, however, the same pattern prevailed. Moreover, the intellectual orientation of the stayers at both private and public colleges was much lower than one would normally expect of college students, particularly the stayers, on this dimension of academic disposition or/and interest. This orientation was on the whole still lower for the students at the private schools than for those at the public institutions. Although one usually expects that the permissive open door policy of admissions of the public schools would inevitably attract a wide range of students on this measure, it is surprising to note the similar phenomenon among the private schools usually expected to be quite selective. That the student body is far from homogeneous on this characteristic for both private and public colleges is evidenced by the range of means and especially the standard deviations within and across the schools.

As Table 2 indicates, the most acute discrepancy on intellectual orientation occurred at Wright between the stayers and the dropouts. Of all the colleges Wright, a public college, had students who simultaneously scored the highest mean for the stayers, .76, and the lowest, -9.66, for the dropouts on this dimension. This striking difference was significant beyond the .01 level. This anomaly was further supported by the fact that this institution does not

Table 2. PROFILE MEAN DIFFERENCES FOR STAYERS, DROPOUTS, AND TRANSFERS ON INTELLECTUAL ORIENTATION

	Intellectual Orientation								
	Stayers			Dropouts			Transfers*		
College	Mean**	SD		Mean	SD		Mean	SD	
Private									
Felician	.40	8.72	N=49	3.16	12.05	N=6	—	—	N=0
Kendall	-3.77	11.83	N=85	-7.55	13.07	N=11	1.84	9.52	N=14
Trinity	-2.31	9.67	N=106	-4.87	6.53	N=10	—	—	N= 2
Public									
Loop	.63	10.89	N=159	-3.75	9.65	N=29	—	—	N=2
Thornton	-1.76	10.36	N=125	.75	10.79	N=11	-2.0	4.58	N=3
Wilson	-0.85	11.12	N=95	-2.96	10.78	N=30	11.83	11.94	N=7
Wright	.76	9.55	N=68	-9.66	4.88	N=10	-1.88	9.69	N=26
Grand Total=848									

*In several institutions only two or three transfers as defined in this study were recorded. To avoid misleading or meaningless comparisons, they were omitted from the analysis.

**The norm or mean (not the Median) established by G. Stern, author of the Activity Index measuring such personality characteristics, is based on a standardized scale score of 0. Any score below this norm would be considered below average and any score above this norm above average for college students included in nationwide sample.

enroll students with the highest scholastic aptitude and that the transferers also scored about the lowest on intellectual orientation of all the schools. It must be also observed that this college experienced the highest rate of transfers among its students within the academic year.

Two other prominent exceptions occurred on differences on intellectual orientation between stayers and transfers. At both Kendall and Wilson those who transferred within their first year were considerably above the stayers on this orientation. A related phenomenon of interest is that for the total sample of students in this study, Kendall and Wilson represent the extremes in academic ability. Kendall (private) enrolls students with the highest capacity measured by scholastic aptitude scores while Wilson (public) accepts among the lowest on this trait. Ostensibly those students high on intellectual orientation thrust into a college climate low on this interest left for institutions more compatible with their needs. The conflicting gap in the interests between these students and their peer group apparently was great enough to induce withdrawal.

Admittedly, the factors accounting for dropping out, staying, or transferring are complex. In the search for a common denominator to explain more of the variability in student retention, other notable disparities on other personality traits and values were observed. These latter variables may have been equally or even more predictive of the students' decisions to stay, drop, or transfer. A summary was compiled to indicate only those significant differences on which a general consistency existed across all the schools. The former included such considerations as the effect of students' values and scholastic aptitude and the latter explored the relationship of such traits as ego defensiveness and conformity to staying or leaving.

Table 3. Comparison of Significant Mean Differences Between Stayers, Dropouts, and Transfers on Selected Personality Characteristics

School	Variable	Group	Group	Difference	S.E.	D.F.	t	Significanc
Private		Stayers	Dropouts					
Felician	Sch. Apt.	301.7	287.4	14.3	5.39	51	2.65	.01
	Theoretical	34.9	40.3	-5.4	2.61	53	-2.06	.04
Kendall	Social	38.6	31.5	7.1	3.13	88	2.26	.02
		Stayers	Transfers					
	Religious	36.6	30.3	6.3	2.87	92	2.19	.03
		Dropouts	Transfers					
	Aesthetic	36.5	44.8	-8.3	3.67	20	-2.25	.03
Public		Stayers	Dropouts					
Wright	Theoretical	41.7	35.1	6.6	3.29	76	2.00	.049
	Social	35.7	43.3	-7.5	2.83	76	-2.67	.009
		Stayers	Transfers					
	Sch. Apt.	20.47	17.04	3.4	.65	89	5.22	.000
		Dropouts	Transfers					
	Sch.Apt.	20.16	17.04	3.1	1.41	26	2.20	.037

That scholastic aptitude significantly affected withdrawal from school only at Felician (Table 3) further supports the mounting evidence of the low predictive validity of this variable. Actually an inverse relationship existed at Wright. It appears that the less academically able, measured by such traditionally acceptable barometers as ACT or SAT scores, were also more likely to transfer to other colleges

than those with higher aptitudes. The majority of those transferring from this college had ACT scores of 12 through 17, appreciably below the average of 19 for the college and the established norm of 18 for this type institution.

Noteworthy difference on attributes other than academic ability alos contributed to the students' tendency to dropping out. No underlying uniformity, however, on students' values among the schools was found to account for staying or dropping. Some specific distinction between the private and public schools was noted on the Social value. At the private Kendall college the emphasis on the Social values is considerably higher that that at Wright. As Table 3 indicates, those students at Kendall with very low Social and Religious value orientations left the institution. Conversely, those students with relatively high Social values at Wright appeared prone to leaving the institution characterized by a stress on Economic and Political values. The differences were unequivocably significant.

Finally, differences between the stayers and leavers on such traits as ego defensiveness and conformity were carefully examined. Consistenty throughout the schools, public and private, dropouts and transfers, but particularly the dropouts, were much less ego-defensive and less conforming then the stayers. Some of these differences were statistically significant. The dominant behavior of the dropouts could be described as independent, ascendent, obdurate to almost the point of rebelliousness.

It has been further indicated that whether significant changes in values occur among students due to their college experience was still inconclusive. A growing amount of research strengthens the belief that change occurs infrequently and only at a few environmentally potent institutions. The following findings in Table 4 attest to either the difficulty in effecting meaningful changes in values or/and the relative impotency of the school to provide the stimuli necessary to the nurturance of this change.

Table 4. Multivariate Tests of Significance of Changes in Values Between Pretest and Posttest Scores-Private and Public Colleges

College	F Ratio	d.f.	Probability level
Private			
Felician	2.08	5 92	.07
Kendall	1.15	5 104	.33
Trinity	.79	5 148	.55
Public			
Loop	1.08	5 220	.33
Thornton	.71	5 182	.61
Wilson	.67	5 142	.64
Wright	1.13	5 134	.34

Overall, no significant changes in values occurred at any school. Even the hierarchy of these basic interests remained static; identically the same rank order of the value scales existed at the beginning and at the end of the year for freshmen and sophomores. The value pattern remained unchanged. Only at Felician college did any shift in basic values approach the .05 criterion of statistical significance. Ironically, the majority of students became significantly less theoretical in their value orientations.

A major concern of this investigation, however, was to extend beyond aggregate figures alone by looking at personality subgroups within these cultural aggregates. Under hypothesis 2a it was argued that principally students characterized as intellectually oriented would change in either one or more of the basic values as a result of their college experience.

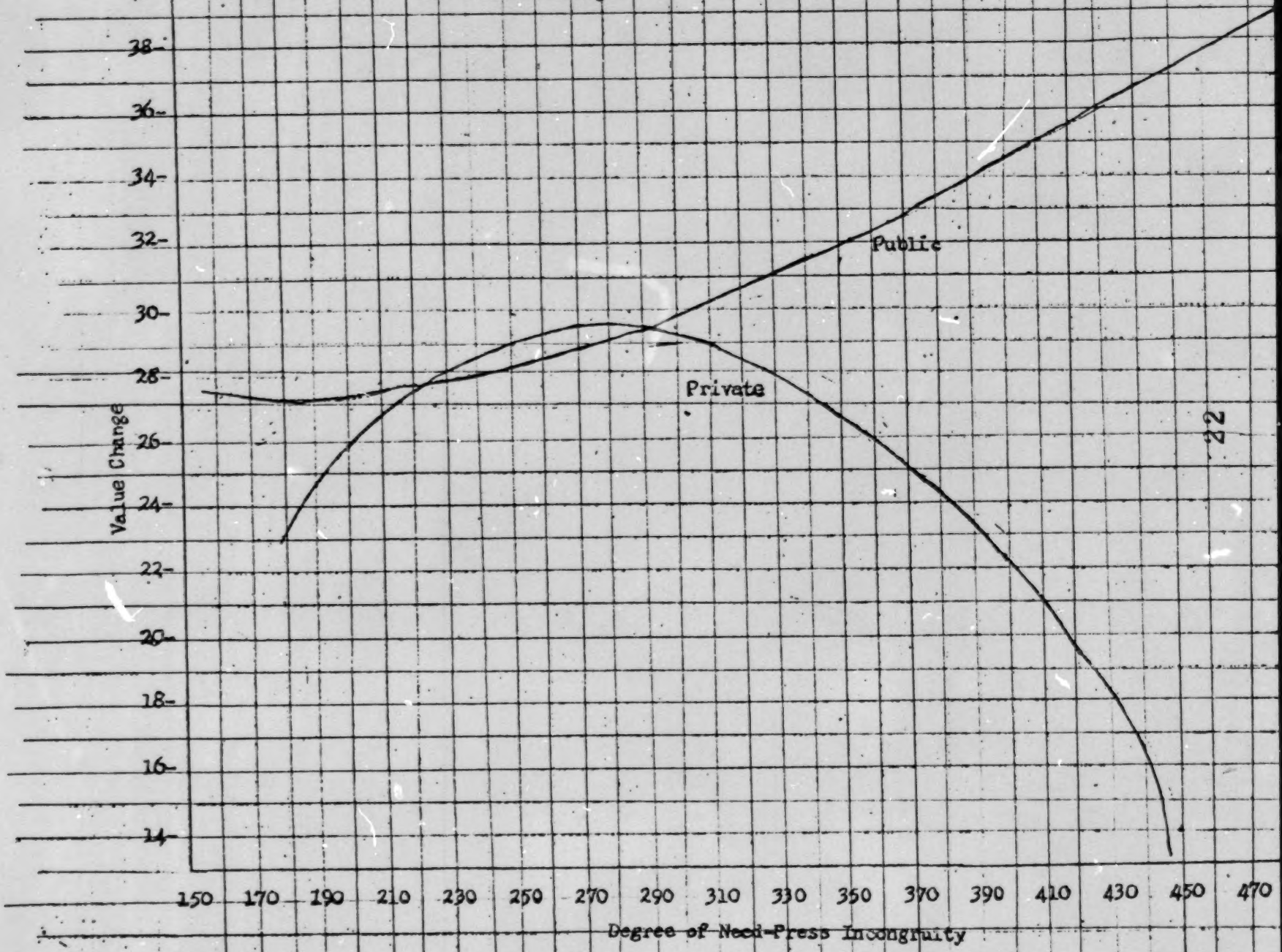
Only at Trinity college, a religious institution, did the intellectually-oriented student change in values--he became more religious. At Felician, the other private, religious school, the less intellectually oriented student became more aesthetic in his values. Among the public colleges, significant value change asso-

ciated with intellectual orientation was observed only at Wilson. At Wilson, those scoring high on this trait apparently became more theoretical in their interests and less religious. It appeared as if the students at Wilson, the school with the highest dropout rate, also underwent the most significant change in values. However, Wilson college, where reportedly the most change in values occured, also experienced the highest dropout rate and produced about the lowest percentage of posttest responses. Consequently, selective mortality reduced the validity of this finding.

At Wright, scholastic aptitude, as measured by ACT scores, had the most potent net independent effect on a change in Economic values. The negative correlation -.265 with an F ratio of 4.83, significant at the .05 level, suggests that the less academically able increasingly diverted their energy and interest toward the more practical, how-to-make-more money pursuits. A strong tendency in this same value direction was also noted among the scholastically less able at the other institutions.

It had been further hypothesized that not only would the intellectually-oriented student be the most susceptible to change but also that some intermediate degree of incongruity in the need-press would be the optimal point of most change in values measured by total absolute value changes. Although three types of incongruities were postulated as likely determinants of change, only the need-press incongruity called normative consensus appeared to significantly affect value changes. Neither the degree of distorted perception nor alpha-beta press had any impact on change. The degree of normative consensus, the difference between a student's needs and the expectations of the total college environment, was significantly related with total value change at Kendall, Wilson and Wright colleges. This need-press variable also contributed strongly to the multiple correlation with value changes at the other schools. The significant effect in the degree of this need-press incongruity on value change, however, differed sharply between the private and public colleges. An

Figure 2. Need-Press Incongruity (Normative Consensus) and Total Value Change--Private and Public Colleges



intermediate degree of dissonance between the students' needs and the environmental press produced the optimal point of change in basic attitudes within the private colleges, as predicted; within the public schools, however, high incongruity on the normative consensus appeared to elicit maximal change. Because of the striking contrast in the effect of the degree of incongruity among the private schools versus public schools, it was decided to run an analysis by type of college also.

A step-wise regression to analyze the contribution of each independent variable toward total value change indicated the significant impact of the quadratic degree of incongruity upon value change within the private colleges. Adding the covariate incongruity squared to the equation produced a chi-square of 4.44, significant at the .03 level, for the private colleges. In contrast, a linear degree of incongruity in the need-press contributed most forcefully in effect on value change in the public schools as evidenced by a chi-square of 5.66, significant at the .05 level. In brief, a moderate degree of dissonance between a student's needs and the institutional expectations provided the conditions to elicit the most change within private schools. Within the public schools, the appropriate conditions for effecting the most change appears to be when greater amounts of discrepancy between the student needs and the college expectations prevail. This difference by type of college in the degree of need-press incongruity necessary to influence maximal change in values is further clarified and illustrated in Figure 2.

Hypothesis 3 stated that students scoring high on ego-defensive needs would be relatively impervious to any attempts at attitude and value change. As hypothesized, no significant change in values developed among those characterized as ego defensive. Only at Wilson College, however, did any correlation of this trait with specific value changes approach the .05 level of significance. Here the highly ego defensive student tended to adopt stronger political values, a correlation of .173, mirroring an increased yearning for power and public recognition. In view of the fact that a

majority of the students at Wilson are negroes and from ghetto areas, this tendency appears even more rationally supportable within the contemporary conditions of student unrest. Simultaneously, those characterized as ego defensive within this school also tended to become less social in their value orientations. The negative correlation of - .223 of ego defensiveness with social value change signifies a decreasing concern by this type of student for an intrinsically motivated contribution to public service and welfare.

A related but distinct variable which was suspected of affecting one's predisposition to value change was conformity. Practically speaking, however, no generalized tendencies between conformity and value change were observable throughout private and public olleges. The only exception appeared at Wright college where a correlation of - .325 with religious value change, significant at the .05 level, indicated that the more conforming became less religious.

XII. CONCLUSIONS AND IMPLICATIONS

This study analyzed the process of attrition in psychological and social terms. Recognizing that up to one third of the college dropouts are due to poor grades and academic failure it is equally important to realize that the majority of students leave college for nonacademic reasons, also referred to as the noncognitive or non-intellective factors.

This investigator believed that certainly intellectual orientation would clearly distinguish those who stayed from those who dropped or left for another institution. Since the intellectually oriented student was characterized as typically high on need achievement, disposed to interests in the arts and sciences, either abstract or applied, self-assertive, competitive, and persevering, it was postulated on theoretical and empirical grounds that he would be more likely to stay. It was felt that rationally and emotionally this student would be more capable of overcoming any obstacles and have the necessary intellectual energy and drive to stay. Intellectual orientation of the student did indeed differentiate the stayer from the dropout and transfer.

In some instances the differences were quite pronounced. Nevertheless, the anomaly of having students with lower scholastic aptitude transfer at one college and the transfer of highly intellectually oriented students at two schools with opposite extremes on this dimension suggested other emotional or motivational factors as influencing retention. Furthermore, the mean of the stayers on intellectual orientation was only average or in fact below average at four of the colleges. Further investigation strongly suggested that intellectual orientation per se although important was not the chief correlate of staying or dropping within a school. The extent of difference between a student's interests or needs vis-a-vis his peer group, a sense of incompatibility with the group, was equally or more determinate. Apparently a student may pass courses but chafes under a feeling not of relative deprivation which might be relevant in terms of grades but under an institutional press leading to personal disequilibrium.

Colleges can be viewed as subcultures with numerous role demands that they impose upon students who come from differing subcultures, particularly among the public institutions. Satisfactory performance of the student role entails conformity to prescribed, academic norms. That dropouts were considerably less conforming and least ego defensive implies that they rejected college expectations and lacked apprehension of failure. They disdained submission to institutionalized authority.

Spady's research on the environmental determinants of attrition also provided evidence that the phenomenon had less to do with factors in the student than with a certain condition in the college itself.[1] Furthermore, we have to recognize the multicausality in attrition and the apparent greater importance of affective rather than cognitive factors in influencing retention. The point here is that it is inadequate to ask whether a student has sufficient and appropriate motivation for college. The more meaningful question is: does the student have sufficient and appropriate motivation for a specified college with specified characteristics and objectives.

[1]William G. Spady, Jr., Poor Integration and Academic Success: The Dropout Process at Chicago (Unpublished Dissertation, The University of Chicago, 1967).

Holding values and orientation that are dissimilar from those of the general collectivity and lacking a sense of campatibility with the immediate social system as they affect dropping out both support Heider's balance theory. Students whose values are consistent with the prevailing norms of the college adjust to the climate and are less prone to leave it. In postulating the necessary conditions for attitude change, however, certain modifications have to be made.

First, however, this investigation has buttressed one major condition for a lack of value change. According to Maslow, those individuals with lower order unsatisfied needs or drives, such as the needs for a sense of personal security, adequacy, self-esteem, are less prone to strive to achieve other higher order needs. Those who were highly ego-defensive manifested the least shift in any of their basic attitudes. What minimal change was noted occurred in the direction of increased status seeking and decreased concern for social amelioration.

Change in basic attitudes in college is the exception rather than the rule. Bloom observes that "less and less change is likely in a group or in an individual as the curve of development of a characteristic reaches a virtual plateau."[1] This study furnished added support to that contention. The possible rebuttal that many students at these schools had not yet reached that level of development but were in some retarded process of self-identity, as Erikson would suggest,[2] does not appear valid. A student's development, however, becomes an ecological problem in which initial personal characteristics interact with the college environment. That some limited value change occurred among students reflects on the efficacy of certain stimulating as opposed to deprived environments. This study has reopened the issue of the impact of the college on student values.

This situation although dismal is not without hope. A sanguine note has been struck on this seeming intractability of values to change by identifying the

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[1] Benjamin S. Bloom, Stability and Change in Human Characteristics (Chicago: The University of Chicago Press, 1963), p. 218

[2] E. H. Erikson, "Identity and the Life Cycle," Psychological Issues, 1959, 1, pp. 1-171.

appropriate personal-environmental conditions contributory to change. In the process it appears that some advance also has been accomplished in reconciling the ostensibly opposing consistency and incongruity theories. An intermediate degree of incongruity exerted the most influence on basic attitudes among the students at the private colleges. An almost linear, increasing degree of incongruity between the student needs-environmental press produced a proportionately increasing likelihood of more change among the students at the public schools. This suggests the following; for private schools, incongruity theory is appropriate for explaining and predicting student attitude change while the principles of stimulus-response or balance theory are more defensible in accounting for any change among students at the public schools. A situation involving a moderate amount of dissonance between student personality needs and environmental press is supportive of attitude change among the students at the private schools; conditions characterized by more extreme incongruence between the individual and his college environment are conducive to basic attitude change among students at the public schools. Among the private schools this intermediate degree of incongruity is the optimal point beyond which attitude shifts are much less likely to occur; on the other hand, maximal change appears more apt to develop with more extreme incongruity in the need-press among students at the public institutions or the optimal point is not within the range for the schools tested using the instruments selected.

Specific factors which bring out the above phenomena await further evidence. Probable explanations are that students at the private college identify more closely with their schools and that the more selective recruitment of the students by the college provide more fertile conditions for value change. This perceived identity combined with some commitment by the school toward value orientation may provide the atmosphere of increased congruence more propellant to change in basic attitudes. Conversely, because of the indiscriminate admission of students by public schools, a more discrepant need-press induces shifts in values. Student attachment to his public institution would probably be tepid if not indifferent. Moreover, students at the

public institutions commute, live off campus, and are frequently employed on a parttime basis with no time for participation in extracurricular activities sponsored by the college. Consequently, many of these students are more likely than those at private schools to view the academic process in instrumental rather than consummatory terms. Many students come from "working-class" backgrounds that spawn stress on material success and its accompanying "other-directedness" of mass culture. These factors can act as strong insulators against attempts at value changes.

Further reflection suggests an alternative, equally credible if not more viable explantion. Differences in the type and extent of expectations by college undoubtedly exist. The private school's range of expectation of their student behavior and outlooks would appear to be more limited but still more demanding than that of the public institutions. This explicit or tacit sense of expectations could be as readily caught by the student as taught by the faculty. Thus a modicum of environmental pressure would be sufficient to induce value change.

Private colleges may be unwittingly applying more pressure than necessary to induce change. Not only was the total value change less among the private colleges than the public schools but beyond a relatively limited degree of incongruity the likelihood of change diminished sharply. Although statistically no significant value change occurred among the public schools, the total, overall change on the six value scales appeared greater. Because of the greater variability in the nature of the students attracted by the public institutions, it would seem that at least the likelihood of more change can occur on the public campuses with intensified need-press incongruity.

Implications

For Further Research

The following concerns appear to be of significant import for further research. The principles of incongruity as defined and operationalized in this study should be further explored. Investigations into specific kinds of incongruity which contribute most toward the shifts in attitudes are definitely warranted. Investigations into other kinds of incongruity with individual or group value change could be fruitfully

pursued. One area worthy of further effort is the relationship of incongruity between teacher and student values and its resultant impact on selected attitudes. In addition to the assessment of any college impact on basic values, are there significant changes along other personality dimensions, e.g., reduced dogmatism, increased intellectual orientation, increased autonomy, associated with certain values or organizational characteristics? Do student's who live in college dormitories change more than other students in the same schools who commute? More extended longitudinal studies could also determine whether value changes in college persist after graduation.

For Administrators

The college that blandly accepts the cultural matrix within which it exists inhibits the growth of its students. The college that teaches only course content leaves the process of growth in the inexperienced hands of the young. With full appreciation of the individuality of each student, we must nonetheless seek and design that kind of institutional environment that will foster the fullest intellectual development of the largest number of students, particularly those capable of it. Students can also play an instrumental, cooperatively advisory role in forming such an environment. It is only with such knowledge of individual development and a clear statement of the goals to be achieved that education can become less haphazard than it is now. A college should decide which values it wished to promote and then seek the conditions necessary to invoke that change.

This study of the encounter between the individual and the environment is, of course, the study of the relationship between the "predisposition" of the student and the opportunity presented by the college. If higher education is to perform its function of liberating students to realize their best potentials, it must have not only students predisposed to change in the direction of flexibility, objectivity, intellectuality, broadened interests, it must also create; on college campuses, environments to which the readiness for change and growth will respond.